

**Notice of Allowability**

Application No.

10/652,018

Applicant(s)

LIU ET AL.

Examiner

Art Unit

Naum B. Levin

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed on 08/29/2003.
2. ☒ The allowed claim(s) is/are 1-39.
3. ☒ The drawings filed on 22 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**VUTHE SIEK**  
**PRIMARY EXAMINER**

### **DETAILED ACTION**

This office action is in response to application 10/652,018. Claims 1-39 remain pending in the application.

#### ***Allowable Subject Matter***

1. Claims 1-39 are allowed over prior art of record.
2. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or suggest or render obvious:

a method of identifying high quality design points in a circuit design comprising:  
(e) identifying a subset of said design points; (f) for each design point identified in step (e), determining a domination cost as a function of how favorable at least one performance of said design point is with respect to the corresponding performance of at least one other design point identified in step (e); (g) for each design point identified in step (e), determining a tradeoff cost by combining the original cost and the domination cost for said design point; (h) subject to the performance specifications and the circuit topology associated with each design point of a subset of the identified design points, generating another plurality of design points for the circuit, wherein each thus generated design point is generated from at least one of the subset of the identified design points, and at least one device variable of each thus generated design point has a value that is different than a value of said device variable for the at least one design point from which said thus generated design point was generated; (i) for each design point generated in step (h), determining an original cost that is related to the degree of correlation between the performance specifications and the performances of the circuit associated with said

design point; (j) for each design point generated in step (h), determining a domination cost as a function of how favorable at least one performance of said design point is with respect to the corresponding performance of at least one other design point; (k) for each design point generated in step (h), determining a tradeoff cost by combining the original cost and the domination cost for said design point; (l) identifying each design point generated in step (h) that has a tradeoff cost that is the same or more favorable than the most favorable tradeoff cost determined before the preceding iteration of step (k); and (m) if identifying additional design points is desired, repeating steps (h) through (l).

This method utilizes identifying high quality design points in the circuit design, where tradeoff relationships between competing performance specifications are considered.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naum B. Levin whose telephone number is 571-272-1898. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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VUTHE SIEK  
PRIMARY EXAMINER